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Examining the effect of information and communication technology on the educational justice from the Tehran's high school teachers' point of view

Mostafa Ranai

Employee Education Kurdistan, saheb, saqez, Iran

Abstract

The goal of this research is examining the effect of information and communication technology on the educational justice from the Tehran's high school teachers' point of view. The samples used in this research include 200 Tehran's high school teachers who had passed the related course of Information and communication technology. These people are chosen by using multi-phases sampling, in a way the 19 areas of Tehran's educational are placed in 5 geographical categories 1.North 2.South 3.East 4.West. 5. Tehran's centred, and from each group on educational area is chosen by lottery, and teachers are chosen randomly from each area. This research is performed in Tehran's high schools in the years of 85 - 86. The instruments are made for gathering the questionnaires information which was used after gaining the reliability and validity of the questionnaires questions. This research includes 4 theories; all are confirmed after using the chi-square test with a meaningful level ($p < 0/05$). The results of this research indicate that Information and Communication technology by developing the access range, making learning flexible (environmentally and individually) and providing feedback for students can effective in educational justice.

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1. Introduction

Effective inventions in 20th century such as Radio, Television, Audio and Video record system, and Computer, Air and Cable or Satellite transmitters have not technological aspects but their economical and social aspects are their unique characteristics. Most of these technologies become so small as well as cheapness that they are entered to houses of industrial countries and also are used in most of developing countries (Henson, 2002).

All of nowadays societies are relatively information societies. Because of technological development, cultural and educational environment is arisen. This environment can change knowledge and learning sources. One of characteristics of these technologies is increasing complexity and developing facilities, which they are provided.

It must be noted that use of information and communication technology is not a new phenomenon in educational aim. For example, educational radio was come into existence before First World War. Not only did extent and complexity of used technology but also attracted further audiences out of formal system of education including preschool children and adults, changed by passing through the time (UNESCO international commission's report, 1997).

* Corresponding author: Tel: 00989188745871, fax: 00988752622529
E-mail address: m.ranai59@yahoo.com

Therefore, the effect of computer on learning method will be huge and inevitable. So communication and information technologies can undoubtedly provide communication actual equipments with informal education that is one of the much important knowledge presentation systems in learning society. Different stages of learning procedure are rethought in this society totally. Change of these technologies that skilful using of it makes possible the continuous development and progression of knowledge, must lead to rethinking the role and the task of learning systems in lifelong education field. Communications and knowledge and information exchange after this will not be the only growth centre of human activity, but it becomes change into subject that helps to individual evolution in the field of new methods of social life. So all of potential powers of information technology must be served for education (Collis, 1998).

2. Importance and Necessity

Certainly, we cannot discuss major social problems that education faces with them without considering of new information and communication technology (Henson, 2002). Using of information and communication technologies for educational purposes is not a new phenomenon. For example, educational radio had been arisen before First World War. Not only did extent and complexity of used technology but also attracted further audiences out of formal system of education including preschool children and adults, changed by passing through the time (UNESCO international commission's report, 1997).

World developments in information and communication technology cause rapid extension of learning opportunity and accession to educational resources and education, in such that this issue is unimaginable with traditional tools and methods (Jalali, 2001).

Information and communication technology can observe educational equality and a issue that this technology provides equal opportunities for learners as a final aim and consider it for this purpose. Using this technology is in order to eliminating standardization in education and to paying attention to individual differences of learners. Because of the importance of this subject in this research, we struggle to examine the effect of information and communication technology on educational equality.

Villanueva (1999) in his research with title of "Technology in Education, facing with future challenges" believed that information technology also has effect on education as

Such other things, certainly. But critical subject is that, revolution of information and communication technology makes what things are determined in education?

He concluded in his research that benefits of this technology are as follows:

- 1- Information and communication technology causes Tran missive and accessible education can be exist in all locations apart from geographical limitations.
- 2- Education separates itself from paper dependency and provides multimedia resources for learners.
- 3- All the person can learn according to her or his individual difference, recognition level and learning rate.
- 4- It can make learning more flexible.
- 5- Multimedia characteristics cause knowledge and experience that learners can use their recognition ability by that.
- 6- Accessible resources are available to learners continuously and can raise their shortages in the field of research and library activities. (Villanueva, 1999).

Research that are done by Villanueva, proceeds to technology issue in education totally and make what results had results for education. He studied only general subjects of information and communication technology that can affect education. In this study, that are attempted to considering this special case that how information and communication technology can lead to educational equality and provide equal education opportunities for learners. In this study, that is attempted to answering the following questions.

- 1- Can information and communication technology affect educational equality through developing of accession range?
- 2- Can information and communication technology affect educational equality through (individual) learning flexibility?
- 3- Can information and communication technology affect educational equality through (environmental) learning flexibility?
- 4- Can information and communication technology affect educational equality through providing of immediate feedback?

3. Methods

Research method in this study is kind of descriptive and measuring. Statistical universe in this research consists of all of high school-teachers in 19fold regions in Tehran in 2006- 2006 academic year that passed information and communication technology's course.

The sampling method of this study is multistage method. Such that educational region of 19fold in Tehran are categorized into 5 geographical class of north, south, east, west and center and from each class, an educational region is selected by lottery method.

After determining of regions and the number of persons that passed information and communication technology's course in these regions, our desired sample are selected by linear systematic sampling. Regarding of estimation table of sample volume from Morgan universe, the number of samples in this study is 200 persons.

Researcher-made questionnaire is used for gathering data, which is applied after standardization. Apparent currency is used in this study so that is investigated informed and knowledgeable persons about issue and also that is used of advisor and guidance counsellors ideas about tools currency.

Kronbach α method is applied in this study for calculating stability of 40 questionnaires that 0.94 is obtained for it's α which is acceptable.

4. Tables

The obtained result of first question with title of "Can information and communication technology affect educational equality through developing of accession range?" is as follows.

Table 1. First hypothesis's χ^2 test

N	Mean	Standard deviation	χ^2	Degree of freedom	Significance level	H ₀
200	3.7	0.58	201.600	3	0.000	rejected

According to significance level of above test that is below than 0.05, we conclude that H₀ hypothesis is rejected. Therefore, most of replier believes that **information and communication technology** with developing of accession range can affect the educational equality.

The obtained result of second question with title of "Can information and communication technology affect educational equality through (individual) learning flexibility?" is as follows.

Table 2. First hypothesis's χ^2 test

N	Mean	Standard deviation	χ^2	Degree of freedom	Significance level	H ₀
200	3.7	0.55	156.480	3	0.000	rejected

According to significance level of above test that is below than 0.05, we conclude that H₀ hypothesis is rejected. Therefore, most of replier admits that **information and communication technology** with (individual) learning flexibility can affect the educational equality.

The obtained result of first question with title of “Can information and communication technology affect educational equality through (environmental) learning flexibility?” is as follows.

Table 3. First hypothesis's χ^2 test

N	Mean	Standard deviation	χ^2	Degree of freedom	Significance level	H ₀
200	3.9	0.59	153.960	3	0.000	rejected

According to significance level of above test that is below than 0.05, we conclude that H₀ hypothesis is rejected. Therefore, according to table's data, **information and communication technology** with (environmental) learning flexibility can affect the educational equality.

The obtained result of second question with title of “Can information and communication technology affect educational equality through providing of immediate feedback?” is as follows.

Table 4. First hypothesis's χ^2 test

N	Mean	Standard deviation	χ^2	Degree of freedom	Significance level	H ₀
200	3.7	0.67	180.360	3	0.000	rejected

According to significance level of above test that is below than 0.05, we conclude that H₀ hypothesis is rejected. Therefore, **information and communication technology** through providing of immediate feedback can affect the educational equality.

5. Discussion and Conclusion

Obtained results of this study stated that information and communication technology through developing of accessions range, (individual) learning flexibility, (environmental) learning flexibility and providing of immediate feedback could affect the educational equality.

In addition, Villanueva (1999) in his research expressed that information and communication technology guarantees the lifelong and equal accessions to education and provides accessible resources to learners continuously.

It appears that learning through information and communication technology does not limit education in school and does not consider a special period for education. In addition, it omits age and sexual limitation for entrance to school, decreases the social and economical role of family in education as well and besides provides educational equality through providing education according to person's age.

Also, Villanueva (1999) in his research expressed that information and communication technology causes each learner can learn according to her or his individual difference, recognition level and learning rate and can make the learning current flexible.

It appears that when subjects coordinates with growth characteristics of learner and person feels that saved subjects and concepts in her or his mind has relation and continuity with new concepts, then it stable information and concepts, person learns easily, education fits with individual characteristics and by means of this, educational equality is obtained.

Villanueva (1999) concluded that information and communication causes Tran missive and accessible education can be exist in all locations apart from geographical limitations and education separates itself from paper dependency and provides multimedia resources for learners.

It appears that information and communication can affect educational equality through coordinating of learning environment with learners.

It appears that information and communication can prepare students for next stages through assuring them from their learning current and progression and can help educational equality.

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